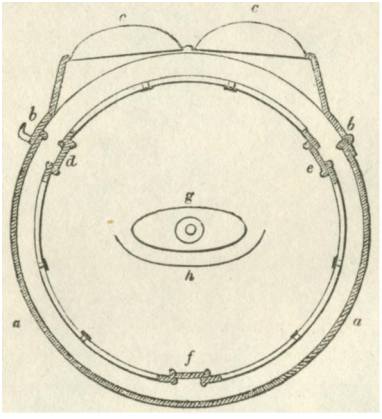
No. XI.

SIGNAL LANTERN.

The SILVER MEDAL *was presented to Mr. G. H.* PEARCE, 6 *Brunswick-Terrace, Blackwall, for his Signal Lantern for Ships; one of which has been placed in the Society's Repository.*

THERE is no code of signals for the use of merchant ships; and when two vessels of this description approach each other in the dark, the only means of communicating mutual intelligence is by shewing a light. This, indeed, serves to point out the place of the two vessels; but, as it does not shew the direction in which they are respectively moving, or if they are under weigh or at anchor, it will not prevent them from occasionally falling on board of each other — an accident whereby often one, and sometimes both, ships are sunk.

To prevent this, Mr. Pearce has invented a lantern, the construction of which will be sufficiently understood from the annexed diagram, which shews a horizontal section through the body.



The external case *a a* is about eight inches in diameter, and nine inches high, exclusive of the hood and ventilator. Rather more than one-third of this case, or from *b* to *b*, is open, and is closed by the door *b b*, having in front two lenses *c c*. Within this case is the lantern *d e f*, which consists of a top and bottom circular plate connected by the three bars *d e f*, forming a skeleton frame with three openings. These are respectively occupied by the three doors *d e*, *e f*, and *f d*, each of them glazed in three pieces, and each hung with hinges, and secured by a bolt. One of these doors is glazed with three pieces of plain glass, another with three pieces of red, and the third with three pieces of green glass. The lamp *g* is placed in the centre, and the reflector *h* behind it. The lamp, however, stands upon, and is solely connected with, the bottom of the external case. The bottom of the inner lantern has a circular hole, which loosely embraces the stem of the lamp.

From this description it will be evident, that if the inner lantern *d e f* be made to revolve, either of the three glazed doors, or parts of any two of them may be made to intercept the light between the lamp and the lenses. This is, accordingly, done; the top of the inner lantern is connected with a hollow shaft which rises out of the apex of the external case, and has a handle and index by which it is turned, and by which its position is indicated.

On the outer case is a brass engraved plate, shewing the system of signals which the lantern is intended to exhibit — thus: —

Before wind		Plain.
Starboard tack		Red.
Larboard tack		Green.
Anchor or Hove to	.....	Red and Green.

In the outer case, also, is a clamping-screw, which bears against the rim of the inner lantern, and by which the latter, after being adjusted to shew the required light or signal, can be fixed, till a change is rendered necessary.

Mr. Pearce's lantern is not a mere speculation or project, but has actually been brought by him into use; for in three months he has supplied above a hundred lanterns,—a fact shewing at the same time the laudable activity of the inventor, and the utility of his invention to those professionally conversant with the subject.

No. XII.

INDIAN SWORD-BLADES.

The Thanks of the Society were voted to Capt. BAGNOLD, R.M., of Blackheath Villa, Saxmundham, for the following account of the Manufacture and Tempering of Sword-Blades in the province of Cutch, from information communicated to him by his brother, Lieut.-Colonel Bagnold, late President of the Regency in Cutch.

THESE swords are celebrated throughout India for their peculiar strength and edge, and are thus made:—An inch bar of fine Swedish or English steel is forged out into plates seven inches long, one inch broad, and one-sixth of an inch thick. Similar bars of fine, soft iron are prepared in the same manner. These are smeared with